Conference on Disarmament

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Note verbale dated 26 June 2014 from the Permanent Mission of France to the Conference on Disarmament addressed to the Acting Secretary-General of the Conference transmitting the national report of France to the Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, submitted at the third session of the Committee[1]

The Permanent Representation of France to the Conference on Disarmament presents its compliments to the Acting Secretary-General of the Conference and has the honour to transmit herewith the national report of France submitted at the third session of the Preparatory Committee for the Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons.

The Permanent Representation of France to the Conference on Disarmament would appreciate it if the report could be issued as an official document of the Conference on Disarmament.

[1] Previously issued under document symbol NPT/CONF.2015/PC.III/14 as a document of the Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, dated 4 April 2014, as it appears in the present document.

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Report submitted by France under actions 5, 20 and 21 of the Final Document of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons[2]

As indicated in the action plan of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (the NPT Review Conference), the Governments of the five NPT nuclear-weapon States, or "P5", are working to implement action 5 in order to "further enhance transparency and increase mutual confidence" and to prepare national reports on action 5 and our other commitments, to be presented in 2014 to the Preparatory Committee of the Treaty within a common framework, in accordance with actions 20 and 21. Action 21 states: "As a confidence-building measure, all the nuclear-weapon States are encouraged to agree as soon as possible on a standard reporting form and to determine appropriate reporting intervals for the purpose of voluntarily providing standard information without prejudice to national security." The framework that we use for our national reporting includes common categories for topics under which relevant information is reported; it covers the three pillars of the Treaty: disarmament, non-proliferation and the peaceful uses of nuclear energy. We encourage all States parties to submit similar reports, in keeping with action 20.

Section I
National disarmament measures

France is fully committed to disarmament in accordance with the objectives of the Treaty. It takes a comprehensive, progressive and concrete approach:

- **Comprehensive and progressive, because the objective of nuclear disarmament cannot be dissociated from collective security. Progress towards its achievement can only be made by taking into account the strategic context; our approach should be viewed as part of a gradual process that will guarantee all parties undiminished security and prevent any new arms race;**
- **Concrete, because action is what matters. In that regard, France has taken very significant unilateral measures and is making ambitious proposals for the determined pursuit of nuclear disarmament at the international level.**

I. National security policies, doctrine and activities associated with nuclear weapons

French doctrine is explained publicly on a regular basis. Its basic principles are set forth, in particular, in the French President's public statements and the white papers on defence and national security, the latest of which was made public in 2013. These statements reaffirm the validity and the principles of nuclear deterrence as conceived by France and help build confidence. Their regular reiteration is necessary, even where there are no new developments. Confirmation of principles already stated constitutes valuable information, providing a form of predictability that should enhance stability.

[2] NPT/CONF.2010/50 (vol. I).

In general, the role of nuclear weapons in France's doctrine of defence and national security **is strictly limited to the defence of its vital interests, in extreme circumstances of self-defence**.

Beyond the considerations contained in the White Paper, this report seeks to explain some fundamental principles of our nuclear deterrence:

1. **Political control of nuclear weapons**. France emphasizes the political conception of nuclear weapons, which may be used only on the decision of the President of the Republic. Hence, their control is strictly political.

2. **Nuclear weapons are not tactical weapons but a means of deterrence**. In the French doctrine of deterrence, nuclear weapons are not battlefield weapons but a means of deterring a potential adversary from attacking our vital interests. For deterrence to work, the circumstances under which nuclear weapons would be used are not, nor should they be, precisely laid out, so as not to enable potential aggressors to calcuiate the risk inherent in such an attack.

3. **Nuclear deterrence is strictly defensive**. France does not threaten any State, and its deterrence is not targeted. That was announced in 1997 and has been reiterated since on many occasions. Potential adversaries must however be aware that the purpose of nuclear deterrence is to protect our vital interests against any State-led aggression, whatever its origin or its form.

4. **Its use is confined solely to extreme circumstances of self-defence**. French nuclear deterrence is governed by a threshold approach, regardless of the nature of the threat. Conversely, some other doctrines are based on a policy that does consider the nature of the threat – a policy that seems reassuring for those who are concerned about the possibility of the use of nuclear weapons. However, a deterrence threshold approach does not give nuclear weapons a greater role, provided the threshold is high. Such is clearly the case in French doctrine, whereby nuclear weapons may only conceivably be used in extreme circumstances of self-defence, a right enshrined in Article 51 of the United Nations Charter.

5. **France applies the principle of strict sufficiency**. France adjusts the level and characteristics of its arsenal to the strategic context, at the minimum level compatible with its security. Our threshold of sufficiency is determined by a national analysis of the strategic context.

6. In response to their aspirations, **France has given security assurances to all non-nuclear-weapon States that comply with their non-proliferation commitments**. These security guarantees are the result of:

- French deterrence doctrine, first of all, inasmuch as it unambiguously and consistently sets out the strictly defensive role of deterrence. Hence, **French doctrine is in itself a primary security assurance** for non-nuclear-weapon States;
- The statement of 6 April 1995, whereby France reaffirmed, for the benefit of all non-nuclear-weapon States parties to the Treaty, the security assurances given in 1982, and which the Security Council took note of in its resolution 984. France considers that commitment **legally binding**, and has so stated. **It therefore considers itself fully bound by the commitment and means to apply it in good faith**;
- The signing of the protocols to the treaties establishing nuclear-weapon-free zones, which cover more than one hundred States.

These commitments do not affect the right to self-defence as enshrined in Article 51 of the United Nations Charter.

II. Nuclear weapons, arms control (including nuclear disarmament) and verification

Disarmament is of the utmost importance to France, which backs up that position through actions and concrete achievements, involving considerable financial and human effort.

A. Status and reduction of arsenals and nuclear forces

(1) Reducing the size of the French deterrent

(a) In keeping with the principle of strict sufficiency, France's arsenal is maintained at the lowest possible level compatible with the strategic context and the foreseeable development of the threat. The current status of French nuclear forces is based on two components, the seaborne and the airborne:

- Seaborne component: four nuclear-powered ballistic missile submarines (SSBNs) based at L'Île Longue and equipped with M51 intercontinental ballistic missiles providing continuous seaborne deterrence;
- Airborne component: implemented by the air force from French soil or from the aircraft carrier Charles de Gaulle, using Mirage 2000N and Rafale aircraft carrying improved medium-range air-to-surface (ASMPA) missiles.

France has fewer than 300 nuclear warheads. It has no undeployed weapons. All of its weapons are deployed and operational.

(b) That figure reflects a **very significant decrease in the size of French forces** due to changes in the strategic environment: **France has cut its arsenal in half over the past decade**.

In the Cold War context, France had gradually acquired three nuclear components. Subsequently, in view of the changing strategic context, **France has reduced its nuclear posture**:

- **A one-third reduction in the seaborne component**: the number of nuclear-powered ballistic missile **submarines** (SSBNs) in the seaborne component has been cut from six to **four**.

France has begun dismantling its M4-class SSBNs. The SSBN *Le Redoutable* has been open to the public at the Cité de la Mer in Cherbourg since May 2002. A series of complex operations was of course carried out beforehand under optimum nuclear security conditions. The remaining SSBNs will follow the normal cycle leading to their total elimination.

- **Major reductions in the airborne component**, with:
  - Early decommissioning and dismantling of the AN52 nuclear bombs carried by Jaguar and Mirage III aircraft, announced in 1991;
  - Withdrawal of Mirage IV strategic aircraft from nuclear missions in 1996. Strategic missions were then taken over by the three M2000N squadrons, which joined the strategic air forces at that time.

In 2008, France was able to announce its decision to **reduce its airborne component by a third. That reduction was complete by 2013**; as a result, France's total nuclear armament is, as announced in 2008, less than 300 nuclear warheads. **All decommissioned weapons have been dismantled.**

- **Abandonment of the surface-to-surface component**

In 1991, France announced several decisions leading to a reduction in its surface-to-surface component: early withdrawal of Pluton short-range missiles (completed in 1993), a cut in the Hadès missile programme (intended to replace the Pluton) from 120 to 30 units, and elimination of the S45 surface-to-surface missiles, which were to replace the S3D missiles at the Plateau d'Albion. In 1992, the Hadès missile programme, intended to replace the Pluton missiles, was ended. In 1997, dismantling of the 30 Hadès missiles that had been produced was completed. Thus, the **substrategic land component has been abandoned**.

In 1996, the strategic surface-to-surface component in turn was abandoned, as France announced the final withdrawal and dismantling of the Plateau d'Albion surface-to-surface systems. Two years later, in 1998, the dismantling of all S3D missiles was completed. **So, France is the only State that, having had a surface-to-surface nuclear force, has completely dismantled it.**

(2) Reduction of alert levels

France's alert levels have seen as significant a reduction as the size of its nuclear forces. It has twice scaled back its nuclear forces' permanent alert level, in 1992 and 1996. **These reductions were in both the response times of forces and the number of weapons systems on alert.**

In particular:

- Since 1996, France has kept only one nuclear-powered ballistic missile submarine permanently at sea;
- Since the removal of the missiles from the Plateau d'Albion, **France no longer has capabilities on permanent high alert**;
- France also announced in 1997 that it **no longer had any permanently targeted forces** ("detargeting"). It has consistently reaffirmed that since.

France's nuclear posture is not a matter of "launch on warning" or "launch under attack" or what some commentators call the "hair-trigger alert" posture. Strict procedures have been instituted to ensure that no weapons can be used without an order from the President of the Republic. Alert status and posture decisions are the responsibility of the President of the Republic.

B. Activities relating to the discontinuation of the production of fissile material for weapons and to efforts to promote a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices

(1) Moratorium on the production of fissile material for weapons

France **stopped producing** fissile material in 1992 (plutonium) and 1996 (highly enriched uranium) to fuel its nuclear weapons programmes. It **announced a moratorium** on the production of such material in 1996.

(2) Dismantling of the former fissile material production facilities for weapons

In 1996, when the moratorium was announced, France also decided to undertake the immediate **dismantling of its production units** in Marcoule and Pierrelatte. France intended the **decommissioning to be complete and irreversible**. The decommissioning

operations represent a considerable financial effort: **€6 billion, €2 billion of which has already been spent**.

The **Pierrelatte enrichment facility has now been fully decommissioned**. The operations, which had required six years of preparation between 1996 and 2002, involved dismantling 4,000 diffusers, 1,330 tons of diffusion barriers, and 1,200 km of piping. **Decommissioning of the Marcoule UP1 reprocessing facility began in 1997 and will continue until 2035.**

Moreover, the first phase of cleanup and dismantling of the plutonium production reactors at Marcoule G1, G2, G3 has been completed, and the second phase, planned to begin in 2020, will continue until 2035.

(3) Commitment to a treaty banning the production of fissile material

France sets a high **priority** on the **initiation of negotiations** at the Conference on Disarmament on a treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices. Such negotiations are the **next logical step, at the multilateral level, in creating the conditions for a world without nuclear weapons** in keeping with the objectives of the Treaty on the Non-Proliferation of Nuclear Weapons, in the context of a realistic approach based on concrete, progressive gestures.

France takes the view that a treaty banning the production of fissile material should place a **quantitative limit on arsenals** by stopping the production of fissile material for the manufacture of nuclear weapons. Such a treaty would be the indispensable complement to the Comprehensive Nuclear-Test-Ban Treaty. Hence, it seems essential for such a treaty to cover all countries possessing nuclear weapons today.

Pending its entry into force, **all States concerned should, as France has done, declare a moratorium on the production** of fissile material for nuclear weapons.

France is a participant in the Group of Governmental Experts established by General Assembly resolution 67/53. It considers that it can usefully contribute to the preparation of future negotiations on a legally binding international instrument.

C. Activities to end nuclear testing and promote the Comprehensive Nuclear-Test-Ban Treaty

(1) Complete cessation of nuclear tests

France put an end to its nuclear tests in 1996.

It signed, on 24 September 1996, and ratified, on 6 April 1998, the **Comprehensive Nuclear-Test-Ban Treaty**.

France is conducting activities aimed at guaranteeing the safety and reliability of its nuclear weapons. The studies include, in particular, a simulation programme and hydrodynamic experiments designed to model materials' performance under extreme physical conditions and, more broadly, the weapons' functioning. These activities scrupulously respect France's obligations under the Comprehensive Nuclear-Test-Ban Treaty, which bans all nuclear explosions, whatever their yield, and puts an end to the development of new and more advanced types of weapon. In other words, the simulation programme is designed only to ensure the safety and reliability of existing weapons and in no way to enable the development of new and more advanced types of weapon.

(2) Complete and irreversible dismantling of the former Pacific Testing Centre

In 1996, at the same time as it ended nuclear testing, France decided to **completely and irreversibly dismantle the sites** of the Pacific Testing Centre on the atolls of Mururoa and Fangataufa in the South Pacific.

The sites were fully decommissioned in 1998 after the destruction of all infrastructure and almost all buildings; clean-up operations were then conducted to eliminate any radiological risk. A team of experts under the auspices of the International Atomic Energy Agency (IAEA) conducted a comprehensive, independent and objective evaluation of the present and future radiological conditions of the atolls of Mururoa and Fangataufa and concluded, in its 1998 report *The Radiological Situation at the Atolls of Mururoa and Fangataufa*, that there was no risk. France maintains radiological and geomechanical monitoring of the atolls to this day.

(3) Support for the Comprehensive Nuclear-Test-Ban Treaty

France actively supports efforts to extend the Comprehensive Nuclear-Test-Ban Treaty to all Annex II States and such other States as have not acceded to the Treaty. At the national level, it has launched and led certain endeavours, in particular in French-speaking countries. It participates in Treaty promotion work conducted by the Eminent Persons Group created in September 2013 by the Executive Secretary of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO). France has also joined in the endeavours regularly conducted by the European Union (EU). It is fully committed to supporting the European Union at CTBTO, and concretely to the Council's decision regarding Union support for the activities of the CTBTO Preparatory Commission.

France also provides **technical support to the Treaty Organization**, and in particular for the **completion of the verification regime** provided under the Treaty. The following actions have been undertaken:

For the international monitoring system, France deploys and operates 17 stations on its soil and provides technical assistance for the operation and maintenance of 8 foreign stations.

France also makes a significant contribution to the engineering work necessary to implement the International Monitoring System, in particular as regards new technologies such as infrasound (sensors, station engineering, and calibration techniques) and the measurement of noble gases.

France's National Data Centre supports the development of CTBTO's International Data Centre, both by providing software (infrasound data analysis, performance monitoring tools for the network of stations) and by seeking innovative solutions. In that way, France contributes actively to the evaluation of the verification regime's effectiveness and to the maintenance of close relations with many national data centres, and contributes to their development.

As regards the system of on-site inspections, France also provides expertise, either directly, to develop the inspection system (inspectors, inspection techniques, participation in major exercises such as IFE14, in particular in the development of scenarios), or through research work.

III. Transparency and confidence-building measures

France is committed to transparency efforts within P5 and vis-à-vis non-nuclear-weapon States. It contributes to them in its national capacity and on a voluntary basis through:

- Regular efforts at **transparency regarding its deterrence doctrine** and its basic underlying principles. France sees this as an important contribution to the stability and predictability of nuclear-weapon States' relations between themselves and with non-nuclear-weapon States;
- **Efforts at transparency regarding its forces.** In that connection, the following should be noted in particular:
  - The announcement that **France has fewer than 300 warheads** (in all, and not just the number of operational strategic weapons deployed);
  - The announcement that France has **no nuclear weapons in reserve**;
  - The announcement and reminders of the detargeting of nuclear weapons;
  - **Advance notice of all space and ballistic missile launches under the International Code of Conduct against Ballistic Missile Proliferation:** since January 2010, France has given notice of launch on 36 occasions, for all space and missile launches conducted over the last four years. Together with that effort, a statement is published each year, in keeping with the confidence-building and transparency measures laid down in the Code of Conduct, setting out French policy on ballistic missiles and spacecraft. Finally, for the first time in the history of the Code of Conduct and in fulfilment of one of its provisions, France in 2011 hosted an inspection by international observers at the Centre spatial Guyanais in Kourou;
- **Transparency efforts regarding concrete disarmament measures** undertaken by France, in particular the dismantling of its nuclear testing facilities in the Pacific and the Pierrelatte and Marcoule facilities for the production of fissile materials for weapons. In that connection, France organized visits to its former fissile material production facilities on 16 September 2008 by representatives of upwards of 40 member States of the Conference on Disarmament, on 16 March 2009 by non-governmental experts, and on 3 July 2009 by international journalists;
  - In addition to this national action, France has been involved in P5 efforts led by China to develop a **glossary of nuclear terminology**. Issues of definition and nuclear terminology are indeed essential so that mutual understanding can be deepened and dialogue facilitated within P5.

IV. Other relevant actions

Nuclear disarmament only makes sense if it does not lead to an arms race in other areas. Hence, it needs to be part of **general and complete disarmament**, in accordance with article VI of the Treaty on the Non-Proliferation of Nuclear Weapons.

France's resolute action therefore also involves other areas of disarmament, in particular the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction. France is the depositary state of the Geneva Protocol of 1925 and is also the country where the Chemical Weapons Convention was signed in 1993. *Its commitment to the fight against chemical weapons, alongside the Organisation for the Prohibition of Chemical Weapons, is recognized.* On the

political front, France has played its role in the universalization of the Convention through actions at the national and European level.

France respects its international commitments and deploys the resources to live up to them:

It supports the efforts of the Organisation for the Prohibition of Chemical Weapons to meet the exceptional challenge of dismantling the Syrian chemical arsenal, making its best experts available to the Organisation and taking steps so that the EU can promptly assist in the destruction process.

In the framework of the *Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, France has for some years been sponsoring a proposal for a peer review mechanism, as, unlike some other organizations, the Convention lacks any verification mechanism. The French proposal is an innovative approach whose purpose is to strengthen one of the main instruments in the fight against proliferation.

In December 2013 in Paris, France undertook a pilot peer review exercise on the national implementation of the Convention.

In the area of *conventional weapons*, 2013 was marked by the adoption, on 2 April at the United Nations, of the Arms Trade Treaty, the first major universal treaty of the twenty-first century in the field of international security and arms control. France signed the Treaty on 3 June and wanted to be among the first to accede to it. It has completed its national ratification procedure and will deposit its instrument of ratification at the end of March 2014 along with some 10 other European States.

The Arms Trade Treaty is a further step towards the ultimate goal of general and complete disarmament. The threat of proliferation of conventional weapons involves a large number of actors and sets States' authority at defiance; it can only be dispelled through sustainable global action.

France, with its European partners, worked hard to ensure that the Treaty would be adopted with stringent requirements. At the Élysée summit in December 2013, we obtained a commitment from the States of Africa to quickly accede to the Treaty, and we are now ready to provide assistance in its implementation.

France is a party to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (1980), which is still the United Nations best framework for conventional disarmament inasmuch as it brings together the main arms producers and users.

France is also a party to the Ottawa Convention (1997), which prohibits the use, stockpiling, production and transfer of anti-personnel mines and provides for the destruction of stocks and the clearance of mined areas, and to the Oslo Convention (2008), which contains similar provisions on cluster munitions. It has fulfilled its obligations under the Ottawa Convention in advance of the deadlines set therein, and scrupulously respects its obligations under the Oslo Convention, devoting nearly €20 million to the destruction of its stock of cluster munitions.

France regularly conducts promotion efforts with non-signatory States regarding these various instruments. This has been signally the case during France's current Presidency (2013–2014) of the Convention on Certain Conventional Weapons, during which France obtained a mandate for the discussion of lethal autonomous weapons systems. The discussions will be informal and will seek to make all States parties aware of the challenges posed by these weapons and to clarify the terms of the debate. If the States deem

the exercise useful, it may be pursued, in the same or a more formal setting, at the next meeting of the States parties in November 2014.

Section II
National non-proliferation measures

The proliferation of nuclear weapons and of their means of delivery represents a threat to international peace and security; it is also a threat to the regions concerned. Therefore, France feels it is imperative to resolutely oppose proliferation. France's actions in the fight against nuclear proliferation and for the implementation of the Treaty on the Non-Proliferation of Nuclear Weapons and the 2010 Review Conference Action Plan have three main foci: strengthening of the nuclear non-proliferation regime, response to proliferation crises, and strengthening of concrete efforts to prevent and impede proliferation.

I. Implementation and support for safeguards

France is committed to the IAEA safeguards regime, which is at the heart of the non-proliferation regime and its strengthening. France itself is subject to many checks by the IAEA and the European Atomic Energy Community (Euratom).

A. French safeguard commitments

- *Voluntary offer agreement*: With the purpose, in particular, of helping to strengthen the safeguards system, France has offered to make certain civil nuclear material subject to IAEA safeguards. The safeguards are applied under a trilateral agreement between France, Euratom and IAEA (see IAEA, INFCIRC/290), which entered into force in 1981;
- France has also voluntarily agreed to transmit *further information* to IAEA:
    - Notification of imports and exports of nuclear material (see IAEA, INFCIRC 207/Add.1, 1984);
    - Notification of imports and exports of concentrates of uranium and thorium (see IAEA, INFCIRC 415, 1992);
    - An annual statement of holdings of civil irradiated and unirradiated plutonium (see IAEA INFCIRC 549, 1998);
- *Additional Protocol*: To enhance IAEA's ability to detect possible clandestine nuclear activities carried out by non-nuclear-weapon States, France signed an Additional Protocol to its 1998 safeguards agreement (entry into force 30 April 2004). The Additional Protocol is an essential expression of France's commitment to nuclear non-proliferation.

  Several points in the French Additional Protocol warrant special attention:

- **Complementary access**: IAEA inspectors may, on at least 24 hours' notice, request access to any location in France — and so to any nuclear facility — in order to resolve any question as to the accuracy and completeness of the information provided pursuant to the provisions of the Protocol, or to resolve certain contradictions in that information and, by cross-referencing, to gather possible evidence of clandestine nuclear activity by a non-nuclear-weapon State.

Complementary access methodology, as well as the activities inspectors may engage in during such access (environmental sampling, measurements), are similar to those provided for in the Model Additional Protocol proposed by IAEA;

- Provision to **IAEA of information on cooperation with non-nuclear-weapon States** relating to all aspects of the fuel cycle. For example, France informs IAEA of its plans for nuclear cooperation involving the fuel cycle with non-nuclear-weapon States over the next 10 years.

B. EURATOM safeguards inspections

Like its EU partners, **France is subject to EURATOM safeguards inspections relating to all civil nuclear material** covered by the Euratom Treaty. As a result, **all French facilities holding civil nuclear materials are subject to inspection** by EURATOM. Such inspection seeks to verify that the use of these materials is consistent with that declared by the users.

C. Implementation of these inspections has made the French civil nuclear fuel cycle one of the most closely inspected in the world

Because of the number and diversity of nuclear installations in France, the country is subject to major inspection efforts covering all facilities involved in civil nuclear activities. In 2013, for example, 336 inspections were conducted by EURATOM. **That thorough effort has made France one of the most closely inspected countries in the world.**

Sensitive nuclear fuel cycle facilities in France are also subject to IAEA safeguards: the new Georges Besse II enrichment plant has been subject to **inspections equivalent to those conducted by IAEA at similar facilities in European non-nuclear-weapon States**; some parts of the La Hague processing/recycling plant and the Melox MOX fuel fabrication plant are also subject to the safeguards. These facilities are also subject to Euratom safeguards. Thus, the **spent fuel reprocessing plant at La Hague is the European facility most thoroughly inspected by Euratom**.

In 2013, Euratom's verification activities in France involved: 336 inspections; 1,475 person-days of inspection and the submission of 214,320 accounting items. In the same year, IAEA's safeguards activities carried out in France involved: 26 inspections; 113 person-days of inspection; submission of 80,000 accounting items; 18 statements provided under the Additional Protocol (France 15 and EU 3).

D. Political, technical and financial support for the safeguards

- **Political support**

France has led or participated in efforts to promote the Additional Protocol within the Group of Eight. France also actively supports EU initiatives to promote the Additional Protocol (financial contributions and targeted approaches).

At the relevant meetings of the IAEA Board of Governors and General Conference, France has consistently called for the universalization of the Comprehensive Safeguards Agreement and its Additional Protocol as the verification standard. France has demonstrated its commitment to continuously enhancing the efficiency and effectiveness of the IAEA safeguards system, in particular through the implementation of safeguards at the State level.

France supports the Agency's activities to make States aware of the importance of the principle of stronger, universal safeguards. Hence, in 2013 it made a financial contribution to the organization of training seminars in Burma and Laos in preparation for ratification of the Additional Protocol.

- **Technical and financial support**

France is committed to the central role played by the IAEA safeguards system and seeks to ensure that IAEA has the requisite human, financial and technical resources to fulfil the mandate from the international community, thus ensuring the credibility of its verification mission.

Thus, a French Support Programme for IAEA Safeguards was established in 1983 to give concrete expression to France's political support for IAEA's verification mission. Under that programme, technology transfers, financial contributions and expert advice are provided to help the IAEA safeguards department to improve the way its verifications are carried out, to make them more technically and economically efficient.

The Programme is **among the four largest national support programmes**; the total value of its actions is estimated to be **€1.5 million a year**.

France has also contributed to the European Union's efforts to support IAEA in the field of verification, particularly with regard to the following European contributions:

- Council decisions on EU support for IAEA activities in the areas of nuclear security and verification;
- Contributions to the renovation of IAEA's safeguards laboratories ("ECAS project").

E. Nuclear transfers called for as part of France's civil nuclear cooperation are subject to permanent safeguards

The intergovernmental agreements underlying France's commitment to civil nuclear cooperation with third countries contain specific clauses that make the materials, goods and equipment subject to IAEA safeguards (which apply under agreements concluded by the particular countries with IAEA). Should those safeguards be inapplicable, the parties are expected to implement a mutually agreed system of safeguards whose effectiveness and scope are equivalent to IAEA's. Finally, intergovernmental agreements generally stipulate that the safeguards provisions shall continue to apply even after the agreement is terminated or expires.

II. Export control

- **France actively participates in international nuclear control regimes**

As a member of the Zangger Committee and the Nuclear Suppliers Group, France contributes to international counter-proliferation efforts, in particular in order to:

- Update checklists and ensure they are still relevant given contemporary technological developments (cf. participation in the work of DMTE (Dedicated Meeting of Technical Experts) and TEG (Technical Experts Group));
- Raise awareness among non-member States of the need to strengthen their export controls (outreach).

- **Implementation of export control at the national level**

The **bilateral agreements** governing the development of France's civil nuclear cooperation with third countries reflect the commitments made by France in the framework of the Nuclear Suppliers Group (obligation to obtain assurances from the consignee in case of transfer or retransfer, etc.).

The **checklists** prescribed at the European level by Regulation (EC) No. 428/2009 (which incorporates the checklists for dual-use goods and technologies of all export control regimes, Nuclear Suppliers Group, Missile Technology Control Regime, Australia Group and Wassenaar Arrangement) are **directly applicable at the national level**. The lists are regularly updated to reflect changing technologies and proliferation issues.

Finally, the French authorities have recourse as necessary to the **"catch-all" clause** (provided under the regulations to allow export control for an unlisted item), where there is a serious risk that the item may have an application related to weapons of mass destruction.

- **Contribution to national capacity-building efforts in this area**

France actively supports European Union actions to generalize a European culture of non-proliferation, particularly with the implementation of the **New Lines for Action by the European Union in combating the proliferation of weapons of mass destruction and their delivery systems, adopted in 2008 and renewed at the end of 2013**.

A significant part of the budget of the **European Union's Chemical, Biological, Radiological and Nuclear Risk Mitigation Centres** (totalling over €20 million a year) is devoted to financial, technical and operational assistance to third countries to help them strengthen their export control systems. France Expertise Internationale is the leading coordinator of French experts for projects undertaken within that framework.

III. Nuclear security

- **Ratification of international conventions**

France has been a **party to all relevant international instruments** in this area since it ratified the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material, on 1 February 2013, and the International Convention for the Suppression of Acts of Nuclear Terrorism, on 11 September 2013.

- **Implementation of IAEA recommendations**

France has made good progress on implementing Circular INFCIRC/225/Rev.5 (or Nuclear Security Series No. 13). French regulations incorporate virtually all the provisions of the IAEA circular and indeed go beyond them in some cases. A peer review mission (International Physical Protection Advisory Service, IPPAS) conducted by IAEA in France (Gravelines) in November 2011 highlighted the quality of the French nuclear security regime, in particular with respect to the physical protection of materials.

- **Action plan signed with IAEA to support its activities**

In April 2005, France signed an action plan with IAEA (renewed again in 2013 until 2015) to support IAEA nuclear and radiological security activities, particularly in the areas of cyber-security, strengthening of national nuclear security systems, physical protection of nuclear material, nuclear material accounting, security of radioactive sources, detection and response. In financial terms, French support has been €730,000 each year since 2011, for a total amount of €2.8 million since 2010. In this context, France has for example conducted work to identify and secure French sources exported abroad.

- **Support for IPPAS missions (International Physical Protection Advisory Service)**

Besides hosting an IPPAS mission in November 2011, France organized a seminar in Paris on 4 and 5 December 2013, in cooperation with IAEA, on IPPAS missions; it was attended by 43 States and international organizations. The seminar was an opportunity to share lessons learned from the IPPAS missions and to encourage all States that had not yet done so to host such missions. Finally, the French authorities have provided support personnel for the preparation of IAEA missions and training activities.

- **Efforts to minimize highly enriched uranium**

Since 2010, France has been working with a number of partner States to minimize the use of highly enriched uranium in the production of medical radioisotopes and the manufacture of fuel for research reactors.

- **Efforts to secure radioactive sources**

The potential use of radioactive sources for malicious purposes poses a real threat to international security. In 2011, accordingly, France signed an agreement with IAEA to identify sources exported by French companies and secure those sources in the countries where they are now located or, where that is impossible, to bring them back to France for processing. This work has already led to a broad inventory of high-activity sources exported; 300 have been identified. Of that total, just under 200 do require action. The repatriation decision will be taken for each on a case-by-case basis. Several repatriation operations have already taken place in recent years and exploratory missions are under way for possible repatriations from several countries.

France maintains a firm commitment to securing and repatriating radioactive sources in the context of the Nuclear Security Summit and the G8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction.

At the Nuclear Security Summit held in The Hague (24 and 25 March 2014), the President of the French Republic announced the launch of an initiative to enhance the security of high-activity radioactive sources security (HARS) through three main working priorities:

- Elaborate the applicable international framework;
- Minimize HARS use;
- Create a "Radiological Source Suppliers Group".

IV. Nuclear-weapon-free zones

France has long supported the establishment of nuclear-weapon-free zones (NWFZs). The regional approach is an important means of promoting disarmament and non-proliferation.

- **Ratification of protocols to treaties establishing nuclear-weapon-free zones**

France has acceded to the **protocols to the Treaties of Tlatelolco, Rarotonga and Pelindaba**.

By so doing **it has reiterated to more than 100 States the security assurances it gave unilaterally in its statement of 6 April 1995**.

In 2012, **France and Mongolia signed two parallel declarations** on Mongolia's nuclear-weapon-free status.

- **Outlook for the signature of new protocols**

France is in favour of the continued development of NWFZs. Having renewed the dialogue with the countries of Central Asia, **France and its P5 partners will sign the Protocol to the Treaty of Semipalatinsk at the upcoming Preparatory Committee.**

With respect to the Southeast Asia NWFZ established under the Treaty of Bangkok, **France, with its P5 partners, has resumed discussions with the Association of Southeast Asian Nations (ASEAN)** to seek solutions to the difficulties identified that will be acceptable to all stakeholders. Hence, France joined the consensus at the last session of the United Nations General Assembly on the resolution to establish a South-East Asia nuclear-weapon-free zone.

- **Middle East zones free of nuclear weapons, other weapons of mass destruction and their delivery systems**

From the outset, France has **supported the plan to create a Middle East zone free of weapons of mass destruction and their delivery systems**. France has been calling on all States concerned to implement the resolution adopted by the Nuclear Non-Proliferation Treaty Review Conference in 1995 in order to make progress towards a lasting peace in the Middle East. At meetings of the First Committee of the United Nations General Assembly it very consistently votes in favour of texts supporting that objective.

The organization of a conference on that zone is among the important measures in the action plan adopted by consensus by the Nuclear Non-Proliferation Treaty Review Conference in 2010. Understandably, there was disappointment with the announcement in late 2012 that the conference was to be postponed. However, the cycle is not completed and France is supporting the facilitator, Mr. Jaakko Laajava.

In addition, France intends to help create the conditions for achievement of objectives of the 1995 resolution. It is working toward that goal, in particular, by its **unrelenting efforts to resolve tensions in the region, especially with respect to the Middle East peace process**. It is also working to ensure that **all States parties to the Treaty on the Non-Proliferation of Nuclear Weapons comply with their nuclear non-proliferation commitments**. That is the goal being pursued by France, in conjunction with its partners in the Group of Six, in order to reach a negotiated settlement to the Iranian nuclear crisis, which is threatening peace and security in the region. As the Security Council recalled in its resolutions 1747 (2007), 1803 (2008) and 1929 (2010), on the Iranian nuclear situation, **a solution to the Iranian nuclear issue would contribute to global non-proliferation efforts and to realizing the objective of a Middle East free of weapons of mass destruction, including their means of delivery**.

France is also helping implement the 1995 resolution **through its commitment to the universalization of the principal non-proliferation instruments**, factors for collective security, within the framework of its bilateral relations with the countries of the region and in relevant multilateral forums. It calls upon all States that have not yet acceded to the Non-Proliferation Treaty to do so, and to implement it fully in the meantime. It also urges all States in the region to accede without delay to the other existing conventions and instruments on the non-proliferation of weapons of mass destruction and their delivery systems.

V. Compliance with non-proliferation commitments and other issues

Proliferation crises constitute **serious threats to international and regional security and stability**. They are an **obstacle to the development of civil nuclear**

cooperation. By undermining mutual trust, they **impede disarmament**. With the worsening of these crises, it is more vital than ever to make decisions regarding the consequences of a proven violation of the Treaty (compliance) or of the abuse of the right of withdrawal.

A. Proliferation crises

- **Iran**

In the context of the Iranian proliferation crisis, France in 2013 negotiated with its partners of the E3+3 Governments, mandated by the Security Council, an interim agreement to halt the progression of the main proliferation dimensions of Iran's nuclear programme. Thus, a joint action plan was approved in Geneva on 24 November 2013 and entered into force on 20 January 2014. France played its role to the utmost alongside its partners in persuading Iran to accept significant non-proliferation measures. Iran's implementation of the agreement is so far satisfactory, as reported by IAEA. France will ensure that it remains so throughout the implementation process.

France is determined to continue its efforts to reach a long-term diplomatic solution based on the restoration of confidence in the exclusively peaceful nature of Iran's programme. The November 2013 joint action plan, together with the Security Council resolutions, will form the basis for negotiation of the parameters of a long-term solution with Iran. Among other issues, great importance must be placed on the complete elucidation of all of the outstanding issues regarding the Iranian programme, and in particular its possible military dimension. That is IAEA's responsibility, but such resolution is an important condition for achievement of a long-term agreement. It will be essential in enabling IAEA, once an additional protocol is applied by Iran, to assure the international community that Iran has no undeclared nuclear material or activities.

- **North Korea**

France is deeply concerned by North Korea's continuation of its nuclear and ballistic missile programmes, which have been condemned many times by the United Nations Security Council. The objective remains the complete, verifiable and irreversible dismantling of the North Korean facilities involved in those programmes and the return of IAEA inspectors without preconditions. In that connection, France is particularly concerned that the ballistics dimension of North Korean proliferation activities not be ignored. Hence, France strongly condemned the ballistic test of December 2012 and the nuclear test of February 2013, both carried out in violation of the relevant Security Council resolutions.

France actively supports the resumption of dialogue in the framework of the six-party talks, in which it is not involved. For negotiations to resume, however, it is essential for North Korea to make practical and binding gestures that will demonstrate its willingness to cooperate in achieving the goal of a denuclearized Korean peninsula, in order to rebuild trust. So far from doing so, North Korea has increasingly been issuing provocative statements about its determination to step up the development of its nuclear programme.

B. Withdrawal (article X)

France took an active part in the debate on withdrawal from the Treaty on the Non-Proliferation of Nuclear Weapons (article X) and its consequences occasioned by North Korea's announcement on 10 January 2013 of its intention to leave the Treaty.

States parties' adoption of measures on that issue, which has been under debate for more than a decade now, is **essential to the Treaty's credibility and integrity and to the**

consolidation of the nuclear non-proliferation regime. It would indeed be unacceptable for any State having benefited from the provisions and cooperation provided for in article IV to acquire nuclear materials, facilities and technologies, to withdraw from the Treaty with impunity and use the resources so acquired for military purposes, or to withdraw after diverting them from civilian to military purposes in violation of the Treaty.

The point of this initiative is not to deny States the right of withdrawal, which is conferred by the Treaty itself in article X. Rather, the point is to recall how that right, which is circumscribed both by the Treaty and by international law, must be exercised, and especially to orchestrate **the best possible response by the international community in case of abuse of the right of withdrawal**.

France has thrown its support behind the proposals that have been circulating in various working papers put forward, in particular, by the European Union, Russia and Ukraine as well as other States parties, all of which are in agreement on many points, such as the need for rapid consultations between States parties, the central role of IAEA in verifying compliance with international non-proliferation obligations in advance of such withdrawal, and the importance of maintaining effective control over the nuclear materials and equipment of the State that has given notice of its withdrawal.

VI. Other contributions to the non-proliferation of nuclear weapons

- **Financial oversight**

France is a participant in the work of the Financial Action Task Force (FATF) to establish international recommendations for the criminalization of financing for proliferation in all its forms and of complicity in such action. Accordingly, France helped draw up FATF's Recommendation 7, adopted in February 2012, which calls on States to apply targeted financial sanctions against any persons financing activities prohibited by Security Council resolutions adopted on the basis of Chapter VII of the Charter.

Pursuant to that international recommendation, France has created in its domestic law a charge of "financing of proliferation" (Act No. 2011-266 of 14 March 2011). The law imposes criminal penalties of up to 20 years in prison and a fine of €7.5 million on anyone who has provided, collected or managed funds, securities or financial assets of whatever kind for the conduct of a proliferation activity. France encourages States that have not yet done so to strengthen their national legislation accordingly.

- **Counter-proliferation policy**

France is a participant in efforts to intercept assets used in proliferation and in 2003 was among the States that launched the Proliferation Security Initiative (PSI).

Seeking to enhance the effectiveness of the PSI, France proposed, in April 2013, the creation of a "Mediterranean component of the PSI". The Mediterranean is a major international trade route and one of those most used by proliferating States to acquire various prohibited resources.

- **Fight against intangible transfers and the dissemination of knowledge and expertise**

Transfers of expertise and sensitive technology can be hijacked and applied to the proliferation of weapons of mass destruction and their delivery systems.

To prevent such hijacking, in France, of knowledge and expertise that could contribute to the development of proliferation programmes, whether nuclear, biological,

chemical or ballistic, France has now supplemented its legislation for the protection of French scientific and technical potential (PPST), established under Decree No. 2011-1425 of 2 November 2011, with a counter-proliferation section.

- **Support for the implementation of Security Council resolution 1540 (2004)**

France supports the implementation of resolution 1540 (2004). Since 2004, French assistance has taken the form of bilateral actions vis-à-vis applicant States and contributions to the "voluntary fund" of the 1540 Committee.

Section III
National measures concerning the peaceful uses of nuclear energy

Pursuant to article IV of the Treaty, France is actively involved in the international community's efforts to share the benefit of civil nuclear energy as safely and securely as possible while ensuring non-proliferation.

I. Promotion of peaceful uses

A. Support for the development of energy applications

- **Sharing of nuclear technologies and expertise**

There are currently 72 reactors under construction in the world, and the Organisation for Economic Cooperation and Development (OECD) and the IAEA confirm that in the coming decades the growth of global nuclear power generating capacity will continue. France considers that in implementing a nuclear power programme one must, first, acquire a comprehensive set of knowledge and skills of the highest level and, secondly, maintain a strong culture of nuclear safety and security.

France has great nuclear expertise in the following areas, from which many countries are benefiting:

- Design and construction of third generation reactors meeting the most exacting demanding safety and security standards over the whole lifetime of the facility, using a range of different reactors based on the EPR programme (1650 MWe) and the ATMEA1 reactor (1100 MWe);
- Safe and efficient long-term operation of reactors;
- Control of the entire fuel cycle and of related services, making for secure and sustainable supply and safe materials management;
- A vital contribution to the development of future nuclear systems (ITER project, studies for the ASTRID sodium-cooled fast neutron reactor (FNR) project, and work on low- and medium-power reactors, Jules Horowitz reactor under construction).

- **A specific institutional offering**

France cooperates with a growing number of countries and pays special attention to the needs of developing countries.

Those of France's partners wishing to develop a nuclear power programme receive coordinated assistance in developing the necessary infrastructure (training and information, energy policy, feasibility and implementation studies, regulatory framework, and waste

management). The French International Nuclear Agency (AFNI), founded in 2008, is active in all phases: study (before the decision to use nuclear energy), diagnosis, counselling and training to help these countries acquire the necessary skills to optimally conduct their projects in coordination with IAEA actions. AFNI relies on the expertise of all industrial and institutional actors in the French nuclear sector (IRSN, ANDRA, AREVA, EDF).

- **Priority given to training**

France has developed a specific training system closely linked to the needs and control of the nuclear industry and to research. The training offered covers all trades and skills required in the industry.

Foreign students enjoy broad access to the training: every year, some 20 per cent of those graduating from French master's programmes in nuclear energy are foreign nationals. The International Institute of Nuclear Energy (I2EN), which coordinates all French training, is the gateway for all foreign students wishing to benefit from such training.

French universities' programmes are supplemented by France's acceptance of IAEA fellowship recipients, professionals and students, for internships or study tours to hospital services (radiotherapy and nuclear medicine units in particular), research institutes and manufacturers. In 2012, France hosted 47 students of 18 different nationalities and 34 students of 16 nationalities for study tours.

As regards cooperation, France shares its training experience with partner countries wishing to develop their nuclear power programmes.

- **Support for international initiatives concerning the nuclear fuel cycle**

On the occasion of its presidency of the European Union, France made a commitment, in conjunction with its European partners, to a financial (up to €25 million) and technical EU contribution to the establishment of a bank of low-enriched uranium (LEU) under IAEA auspices. The IAEA Board of Governors authorized the creation of the bank in November 2010; it will foster the development of economically viable nuclear power programmes, while limiting the risks of proliferation. France has also supported other initiatives in the field of multilateral nuclear fuel assurance, for example the British Nuclear Fuel Assurance (NFA) project or the Angarsk LEU reserve proposed by Russia, both approved by the IAEA Board of Governors.

B. Nuclear applications for development

France supports IAEA's technical cooperation programme and the development of nuclear applications for the benefit of all through financial contributions, provision of expertise and the hosting of trainees and professionals for training in various fields (agronomy, nuclear medicine and environmental protection, for example).

II. Technical assistance through the IAEA for its member States

France actively supports the activities of the Department of Nuclear Energy's Nuclear Infrastructure Development Section (NIDS), formerly INIG (Integrated Nuclear Infrastructure Group), to develop the necessary infrastructure for the establishment of a nuclear power programme through the provision of experts, financial contributions and the organization of training or technical meetings in France.

IAEA's Technical Cooperation Programme makes a substantial contribution to member States' efforts to acquire nuclear technology. France supports the programme by seconding experts to such projects and **through extrabudgetary contributions** (additional

to its contribution to the Technical Cooperation Fund) for the financing of so-called "footnote/A" projects. Between 2005 and 2013, France contributed to **18 technical cooperation projects**.

Health is a **priority action area for France**, which makes regular financial contributions to IAEA's Programme of Action for Cancer Therapy, reception and treatment in specialized wards of victims of radiation accidents, support for the research programmes to combat infectious diseases of the Department of Nuclear Sciences and Applications, and sponsors IAEA partnerships with French actors such as the Development Research Institute and the National Cancer Institute.

France is also active in the development of nuclear technology benefiting **agriculture** and the **environment**. It participates, for example, in the financing of technical cooperation projects in Africa aimed at improving crop production using advanced irrigation techniques.

III. Nuclear safety and nuclear civil liability

A. Action to strengthen the safety framework

France considers that the magnitude of the accident at the Fukushima Daiichi plant and the severity of its consequences have confirmed the need for a policymaking nuclear safety and transparency absolute requirements. The French authorities have always advocated for the maintenance of the highest level of nuclear safety worldwide, and indeed its improvement, and promotion of responsible nuclear power at the international level.

(1) On French soil

- In 2011 and 2012 France carried out **additional safety evaluations** applying not only to nuclear reactors but also to research facilities and fuel cycle plants. A **national action plan**, published in December 2012 by the Nuclear Safety Authority following these evaluations, has been peer-reviewed at the European level;
- France has also hosted **IAEA nuclear safety peer review missions** (one OSART mission (Operational Safety Review Team) per year, plus a new IRRS mission (Integrated Regulatory Review Service) in 2014). All of the above actions were carried out in the name of transparency vis-à-vis other States and peoples: thus, France published reports of the IRRS and OSART peer review missions conducted on its soil, as well as the schedule of past and planned missions;
- Finally, France has sought to **enhance its preparedness and its response to nuclear and radiological crises** by drawing up and disseminating a national crisis management plan. The operators of nuclear facilities have also participated in this effort, **creating emergency response teams** (EDF's nuclear quick response force and AREVA's national response force).

(2) Abroad

- **Support for IAEA**

France has contributed to the definition and implementation of the **IAEA Action Plan on Nuclear Safety**. Then, in December 2012, France published its national version of the IAEA Action Plan.

Strengthening international cooperation on preparedness and response to nuclear and radiological emergencies is also a key issue. Among other support actions, France has sent

a list of considerations in the form of nine concrete proposals intended to redefine the operational role and means of action of IAEA's Incident and Emergency Centre (IEC), in the event of a nuclear crisis.

- **Strengthening of the international safety framework**

France has made a commitment to the universalization and strengthening of the international conventions on nuclear safety, participating actively in the work of the Working Group on Effectiveness and Transparency, which was mandated to draw up proposals to strengthen the Convention on Nuclear Safety.

- **Cooperation in the field of regulatory assistance**

The French Nuclear Safety Authority provides regulatory assistance to third States through bilateral cooperation actions or through multilateral instruments, to help the States concerned to put in place a solid regulatory framework on safety, to set up an independent safety authority and to develop a culture of safety.

B. Civil nuclear liability

France supports the establishment of a global civil nuclear liability regime. The existence of an adequate civil liability regime for nuclear operators in case of accident is an essential condition for the responsible and sustainable development of nuclear energy. Universalization of a civil nuclear liability regime is a major objective of IAEA's action plan on nuclear safety.

France and the United States initiated a reflection on the bases and conditions for the establishment of a global civil liability regime for nuclear damage, culminating in August 2013 in the signing of a joint declaration that reflects our shared priorities on the key issue of compensation for nuclear damage. The declaration affirms our commitment to helping establish a global nuclear civil liability regime based on treaty relations between States providing for fair compensation for victims of nuclear accidents, as recommended in IAEA's action plan on nuclear safety, and encourages States to join such a regime.

It is France's view that the Paris Convention (together with the Brussels Supplementary Convention) and the Vienna Convention, as revised, as well as the Joint Protocol relating to the application of the Paris and Vienna Conventions, constitute an adequate basis for compensation for nuclear damage.

IV. Other issues

France has made **transparency and public information** a key element of its nuclear policy:

- On the one hand, thanks to a strict policy of transparency and community participation in the implementation of its nuclear projects, reinforced by the law on transparency and nuclear safety in 2006, which in particular created the High Committee for Transparency and Information on Nuclear Safety (HCTISN) and bolstered the Local Information Committees (CLIs, 53 in number);
- On the other hand, through sustained communication on topics related to nuclear power.